Inventors Names: HASHIZUME, Tsutomu, et al.

Title: Ink Jet Recording Head Having Piezoelectric Element and Electrode Patterned with Same Shape and Without Pattern Shift Therebetween (As Amended)

Continuation of Appln. No. 08/788,959

Filed: 06/26/2003 Group Art Unit: Not yet assigned SUGHRUE Ref. No.: Q76316

SUGHRUE Telephone No.: 202-293-7060

Sheet 1 of 18

FIG. 1

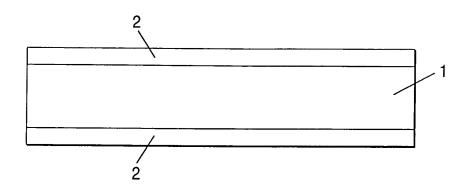


FIG. 2

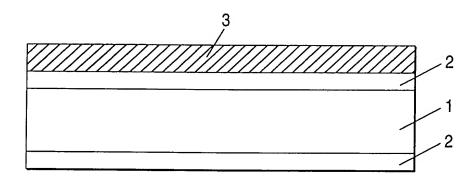


FIG. 3

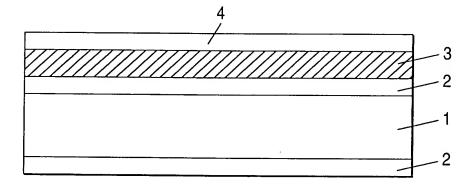
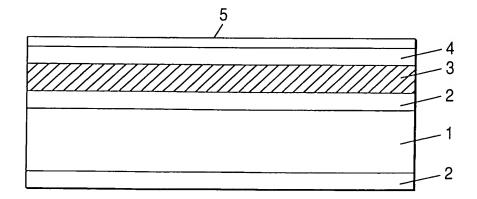


FIG. 4



Inventors Names: HASHIZUME, Tsutomu, et al.

Title: Ink Jet Recording Head Having Piezoelectric Element and Electrode Patterned with Same Shape and Without Pattern Shift Therebetween (As Amended)

Continuation of Appln. No. 08/788,959

Filed: 06/26/2003 Group Art Unit: Not yet assigned SUGHRUE Ref. No.: Q76316

SUGHRUE Telephone No.: 202-293-7060

Sheet 2 of 18

FIG. 5

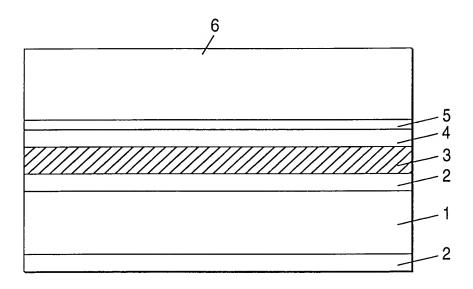
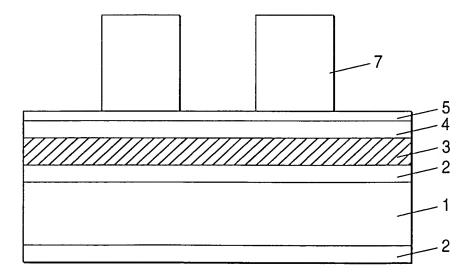


FIG. 6



Inventors Names: HASHIZUME, Tsutomu, et al.

Title: Ink Jet Recording Head Having Piezoelectric Element and Electrode Patterned with Same Shape and Without Pattern Shift Therebetween (As Amended)

Continuation of Appln. No. 08/788,959

Filed: 06/26/2003 Group Art Unit: Not yet assigned SUGHRUE Ref. No.: Q76316

SUGHRUE Telephone No.: 202-293-7060

Sheet 3 of 18

FIG. 7

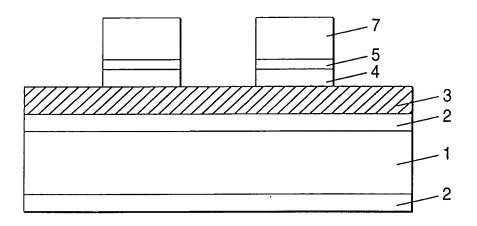
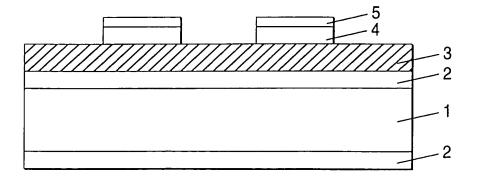


FIG. 8



Inventors Names: HASHIZUME, Tsutomu, et al.

Title: Ink Jet Recording Head Having Piezoelectric Element and Electrode Patterned with Same Shape and Without Pattern Shift Therebetween (As Amended)

Continuation of Appln. No. 08/788,959

Filed: 06/26/2003 Group Art Unit: Not yet assigned SUGHRUE Ref. No.: Q76316

SUGHRUE Telephone No.: 202-293-7060

Sheet 4 of 18

FIG. 9

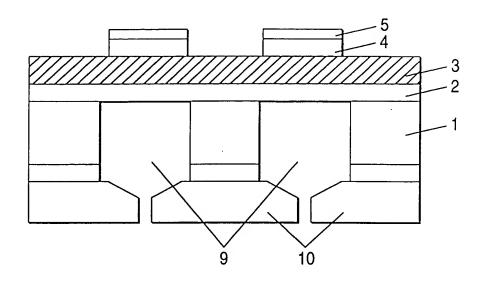


FIG. 10 PRIOR ART

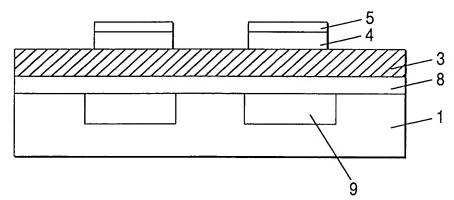
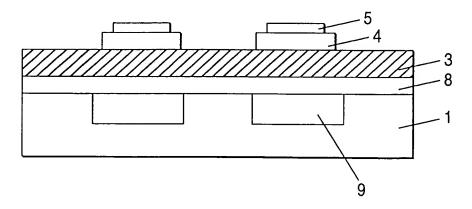


FIG. 11 PRIOR ART



Inventors Names: HASHIZUME, Tsutomu, et al.
Title: Ink Jet Recording Head Having Piezoelectric Element and
Electrode Patterned with Same Shape and Without Pattern
Shift Therebetween (As Amended)
Continuation of Appln. No. 08/788,959
Filed: 06/26/2003 Group Art Unit: Not yet assigned
SUGHRUE Ref. No.: Q76316
SUGHRUE Telephone No.: 202-293-7060
Sheet 5 of 18

FIG. 12

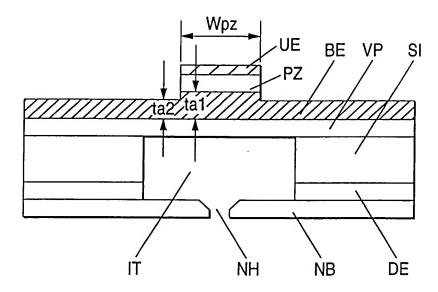
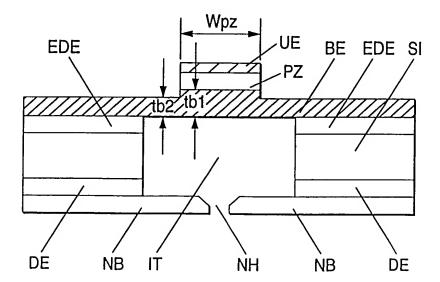


FIG. 13



Inventors Names: HASHIZUME, Tsutomu, et al.

Title: Ink Jet Recording Head Having Piezoelectric Element and Electrode Patterned with Same Shape and Without Pattern Shift Therebetween (As Amended)

Continuation of Appln. No. 08/788,959

Filed: 06/26/2003 Group Art Unit: Not yet assigned SUGHRUE Ref. No.: Q76316

SUGHRUE Telephone No.: 202-293-7060

Sheet 6 of 18

FIG. 14

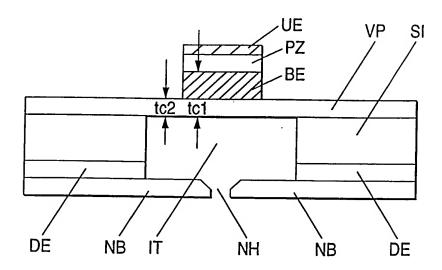
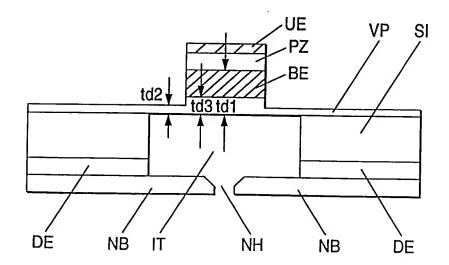


FIG. 15



Inventors Names: HASHIZUME, Tsutomu, et al.

Title: Ink Jet Recording Head Having Piezoelectric Element and Electrode Patterned with Same Shape and Without Pattern Shift Therebetween (As Amended)

Continuation of Appln. No. 08/788,959

Filed: 06/26/2003 Group Art Unit: Not yet assigned SUGHRUE Ref. No.: Q76316

SUGHRUE Telephone No.: 202-293-7060

Sheet 7 of 18

FIG. 16

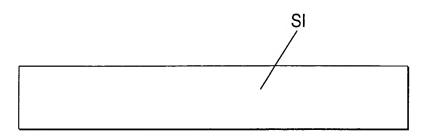


FIG. 17

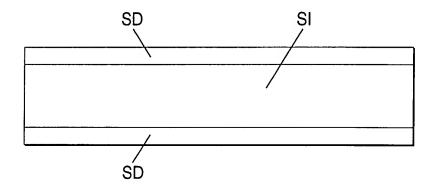
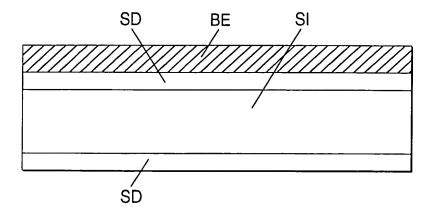


FIG. 18



Inventors Names: HASHIZUME, Tsutomu, et al.

Title: Ink Jet Recording Head Having Piezoelectric Element and Electrode Patterned with Same Shape and Without Pattern Shift Therebetween (As Amended)

Continuation of Appln. No. 08/788,959

Filed: 06/26/2003 Group Art Unit: Not yet assigned SUGHRUE Ref. No.: Q76316

SUGHRUE Telephone No.: 202-293-7060

Sheet 8 of 18

FIG. 19

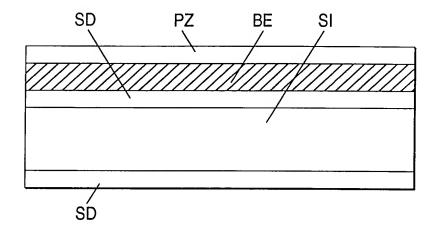
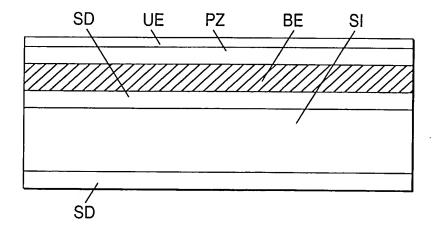


FIG. 20



Inventors Names: HASHIZUME, Tsutomu, et al.

Title: Ink Jet Recording Head Having Piezoelectric Element and Electrode Patterned with Same Shape and Without Pattern Shift Therebetween (As Amended)

Continuation of Appln. No. 08/788,959

Filed: 06/26/2003 Group Art Unit: Not yet assigned SUGHRUE Ref. No.: Q76316

SUGHRUE Telephone No.: 202-293-7060

Sheet 9 of 18

FIG. 21

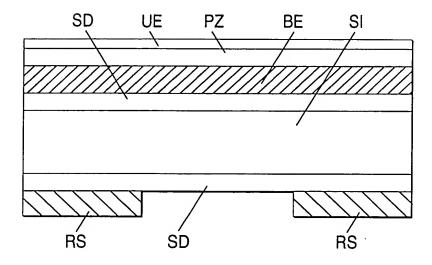
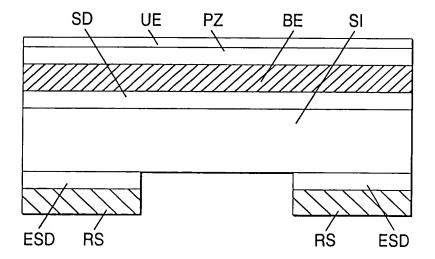


FIG. 22



Inventors Names: HASHIZUME, Tsutomu, et al.

Title: Ink Jet Recording Head Having Piezoelectric Element and Electrode Patterned with Same Shape and Without Pattern Shift Therebetween (As Amended)

Continuation of Appln. No. 08/788,959

Filed: 06/26/2003 Group Art Unit: Not yet assigned SUGHRUE Ref. No.: Q76316

SUGHRUE Telephone No.: 202-293-7060

Sheet 10 of 18

FIG. 23

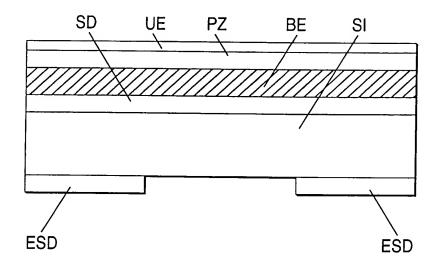
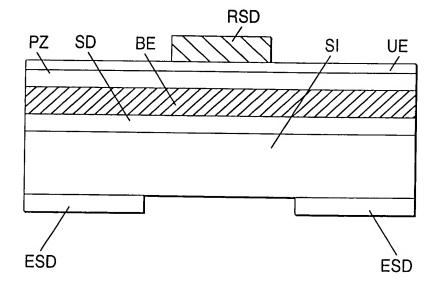


FIG. 24



Inventors Names: HASHIZUME, Tsutomu, et al.
Title: Ink Jet Recording Head Having Piezoelectric Element and Electrode Patterned with Same Shape and Without Pattern Shift Therebetween (As Amended)
Continuation of Appln. No. 08/788,959
Filed: 06/26/2003 Group Art Unit: Not yet assigned SUGHRUE Ref. No.: Q76316
SUGHRUE Telephone No.: 202-293-7060
Sheet 11 of 18

FIG. 25

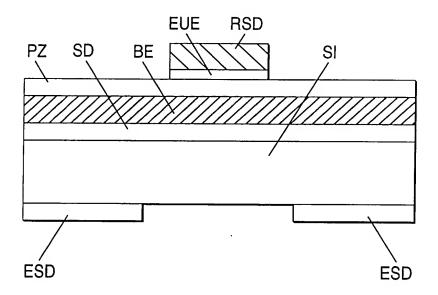
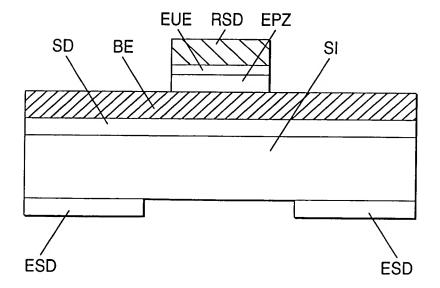


FIG. 26



Inventors Names: HASHIZUME, Tsutomu, et al.

Title: Ink Jet Recording Head Having Piezoelectric Element and Electrode Patterned with Same Shape and Without Pattern Shift Therebetween (As Amended)

Continuation of Appln. No. 08/788,959

Filed: 06/26/2003 Group Art Unit: Not yet assigned SUGHRUE Ref. No.: Q76316

SUGHRUE Telephone No.: 202-293-7060

Sheet 12 of 18

FIG. 27

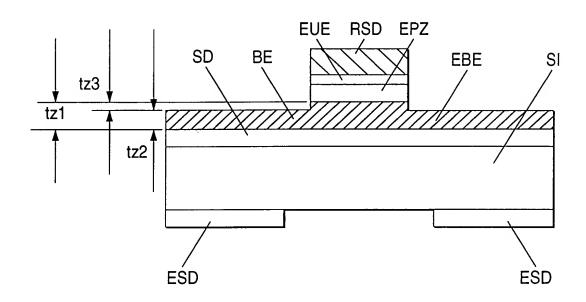
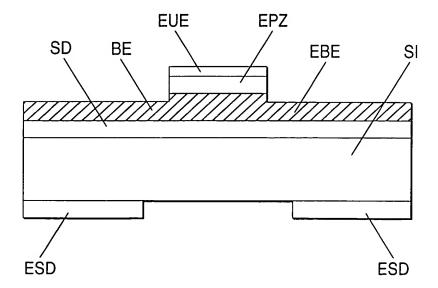


FIG. 28



Inventors Names: HASHIZUME, Tsutomu, et al.

Title: Ink Jet Recording Head Having Piezoelectric Element and Electrode Patterned with Same Shape and Without Pattern Shift Therebetween (As Amended)

Continuation of Appln. No. 08/788,959

Filed: 06/26/2003 Group Art Unit: Not yet assigned SUGHRUE Ref. No.: Q76316

SUGHRUE Telephone No.: 202-293-7060

Sheet 13 of 18

FIG. 29

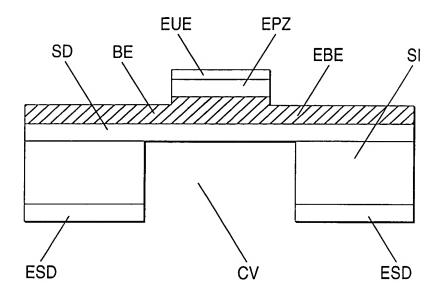
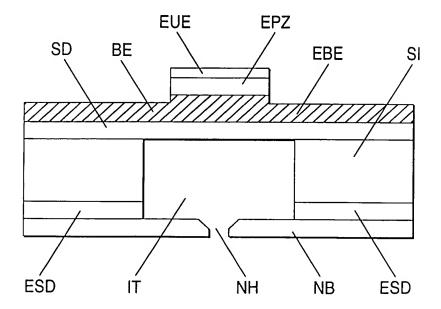


FIG. 30



Inventors Names: HASHIZUME, Tsutomu, et al.

Title: Ink Jet Recording Head Having Piezoelectric Element and Electrode Patterned with Same Shape and Without Pattern Shift Therebetween (As Amended)

Continuation of Appln. No. 08/788,959

Filed: 06/26/2003 Group Art Unit: Not yet assigned SUGHRUE Ref. No.: Q76316

SUGHRUE Telephone No.: 202-293-7060

Sheet 14 of 18

FIG. 31

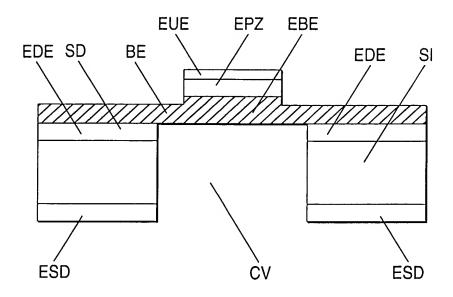
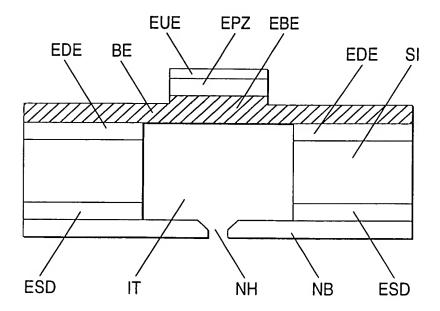


FIG. 32



Inventors Names: HASHIZUME, Tsutomu, et al.

Title: Ink Jet Recording Head Having Piezoelectric Element and Electrode Patterned with Same Shape and Without Pattern Shift Therebetween (As Amended)

Continuation of Appln. No. 08/788,959

Filed: 06/26/2003 Group Art Unit: Not yet assigned SUGHRUE Ref. No.: Q76316

SUGHRUE Telephone No.: 202-293-7060

Sheet 15 of 18

FIG. 33

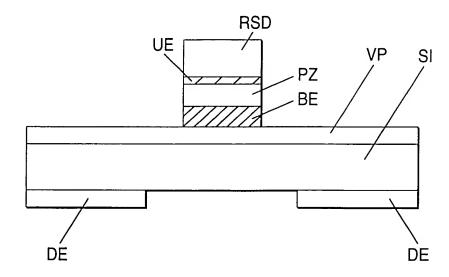


FIG. 34

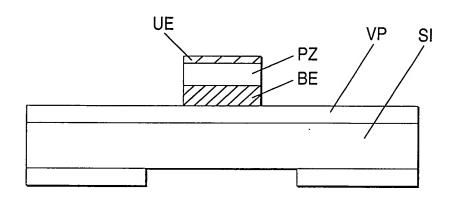
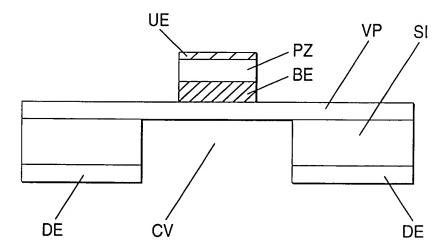


FIG. 35



Inventors Names: HASHIZUME, Tsutomu, et al.

Title: Ink Jet Recording Head Having Piezoelectric Element and Electrode Patterned with Same Shape and Without Pattern Shift Therebetween (As Amended)

Continuation of Appln. No. 08/788,959

Filed: 06/26/2003 Group Art Unit: Not yet assigned SUGHRUE Ref. No.: Q76316

SUGHRUE Telephone No.: 202-293-7060

Sheet 16 of 18

FIG. 36

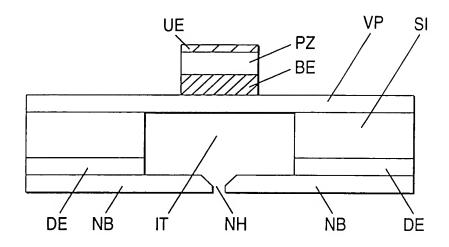


FIG. 37

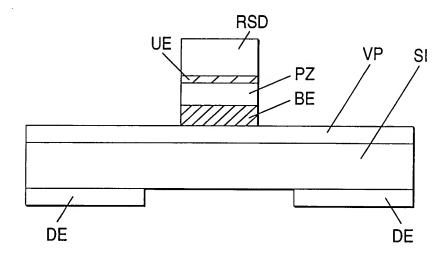
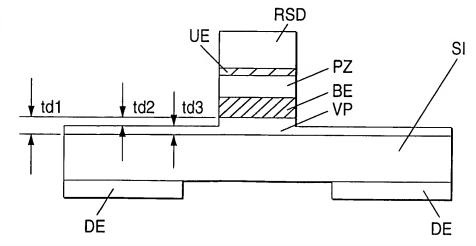


FIG. 38



Inventors Names: HASHIZUME, Tsutomu, et al.

Title: Ink Jet Recording Head Having Piezoelectric Element and Electrode Patterned with Same Shape and Without Pattern Shift Therebetween (As Amended)

Continuation of Appln. No. 08/788,959

Filed: 06/26/2003 Group Art Unit: Not yet assigned SUGHRUE Ref. No.: Q76316

SUGHRUE Telephone No.: 202-293-7060

Sheet 17 of 18

FIG. 39

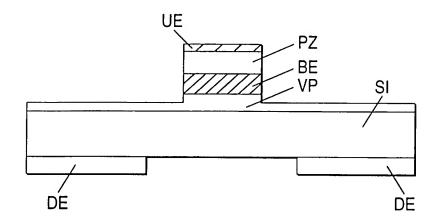


FIG. 40

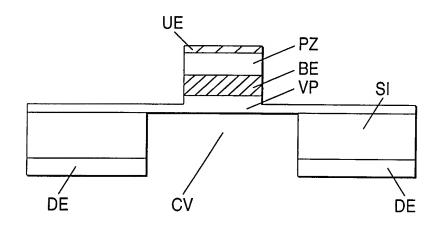
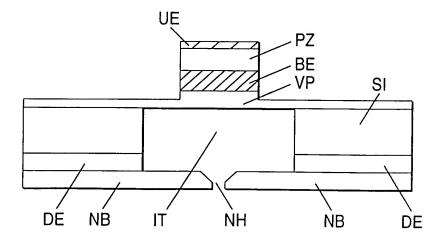


FIG. 41



Inventors Names: HASHIZUME, Tsutomu, et al.

Title: Ink Jet Recording Head Having Piezoelectric Element and Electrode Patterned with Same Shape and Without Pattern Shift Therebetween (As Amended)

Continuation of Appln. No. 08/788,959

Filed: 06/26/2003 Group Art Unit: Not yet assigned SUGHRUE Ref. No.: Q76316

SUGHRUE Telephone No.: 202-293-7060

Sheet 18 of 18

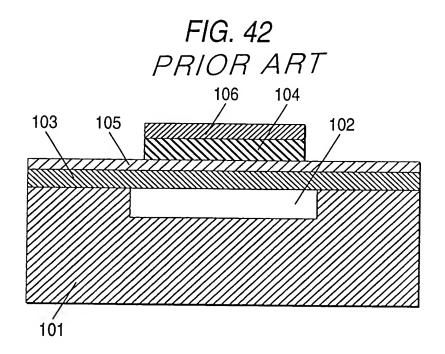


FIG. 43 PRIOR ART

